WORK BENCH

Safety First!

- ☑ Use eye protection, always!
- ☑ Use ear protection with loud power tools
- ☑ Stay with children while they work!
- ☑ Follow tool manufacturers' safety guidelines

TOOLS

Handsaw - Japanese style recommended

Clamps

Drill

* drill bit - 1/4 inch [6.4 mm]
* Drill bit - 1/8 inch [3.2 mm]
* driver bit to fit pocket-screws

Kreg Jig

* Drill bit - designed to work with the Kreg Jig
* Driver bit - long Kreg Jig driver bit to fit screws

Scissors

Tape measure

Pencil

Safety glasses

Pliers

Jobs for kids and adults together

Adult-only jobs

SUPPLIES

Plywood

Note: Lowe's will cut plywood to size in-store and many sizes are available pre-cut in the lumber aisle

One sheet of 3/4-inch plywood measuring 24" x 48" [1.9 x 61 cm x 122 cm]
* No cutting required

One sheet of 1/4-inch plywood measuring 24" x 48" [0.635 x 61 cm x 122 cm]
* Cut to 18" x 37-½" [45.7 x 95.3 cm]

Table legs - 2 x 2 poplar

Note: Actual dimensions of '2 x 2' lumber are 1-½" x 1-½" [3.81 x 3.81 cm].

For the legs you'll need four 24-inch [61 cm] poplar boards. You can replace the poplar legs with longer lengths as children grow.

Frame - 1 x 4 poplar

Note: Actual dimensions of '1 x 4' lumber are ¾" x 3-½" [1.905 cm x 8.89 cm]
* Cut 4 pieces at 36 inches [91.44 cm]
* Cut 4 pieces at 21 inches [53.34 cm]

Screws

Thirty-two (32) Kreg pocket-hole coarse-thread screws, 1-¼-inch [32 mm] #2 square-drive washer-head screws

Thirty (30) ½-inch [13 mm] #8 pan-head sheet metal screws (for attaching the lower shelf bottom)

Water based clear-coat

MinWax WoodSheen, in colour 'Natural'

Vinyl gloves

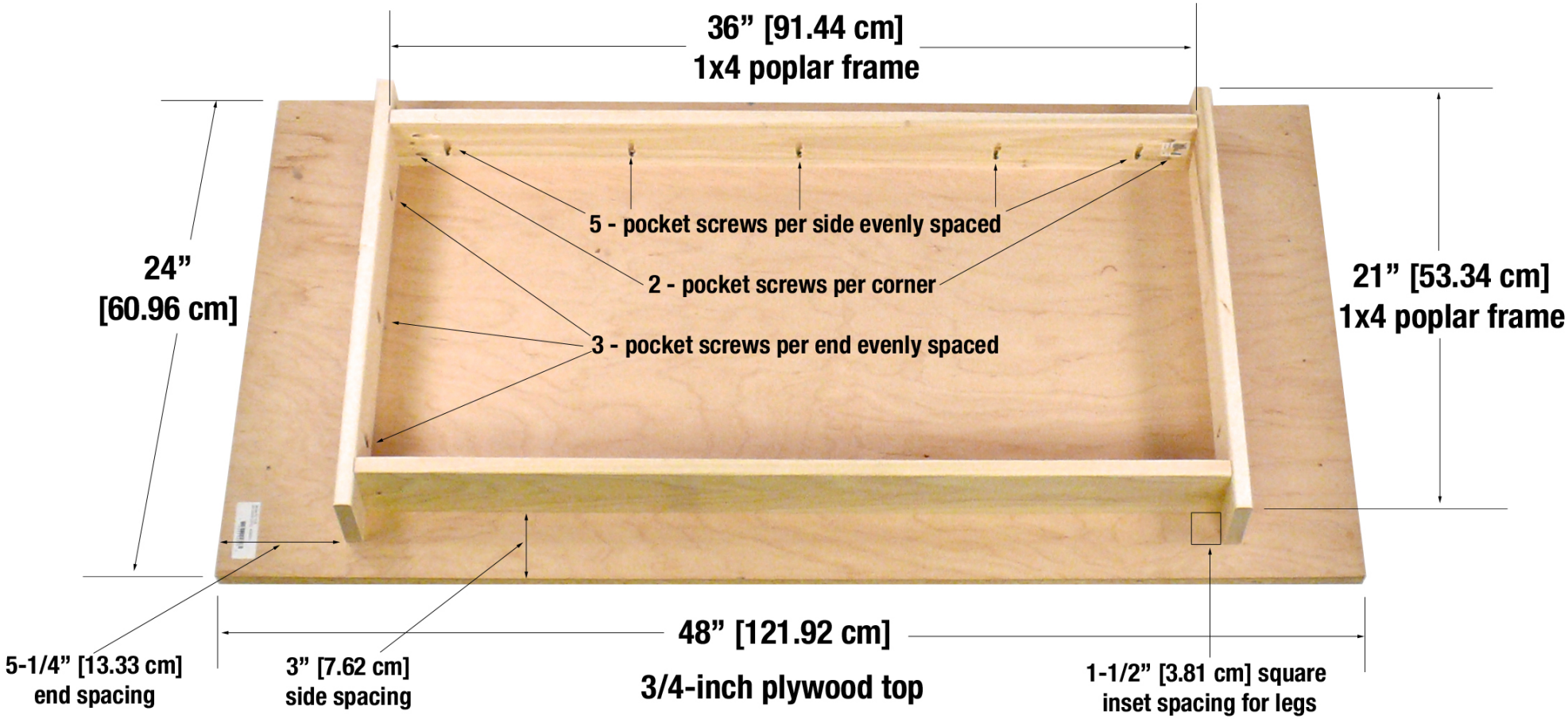
Rags for clear-coat and general clean-up

100-120 grit sand paper or sanding sponge

Carriage Bolts

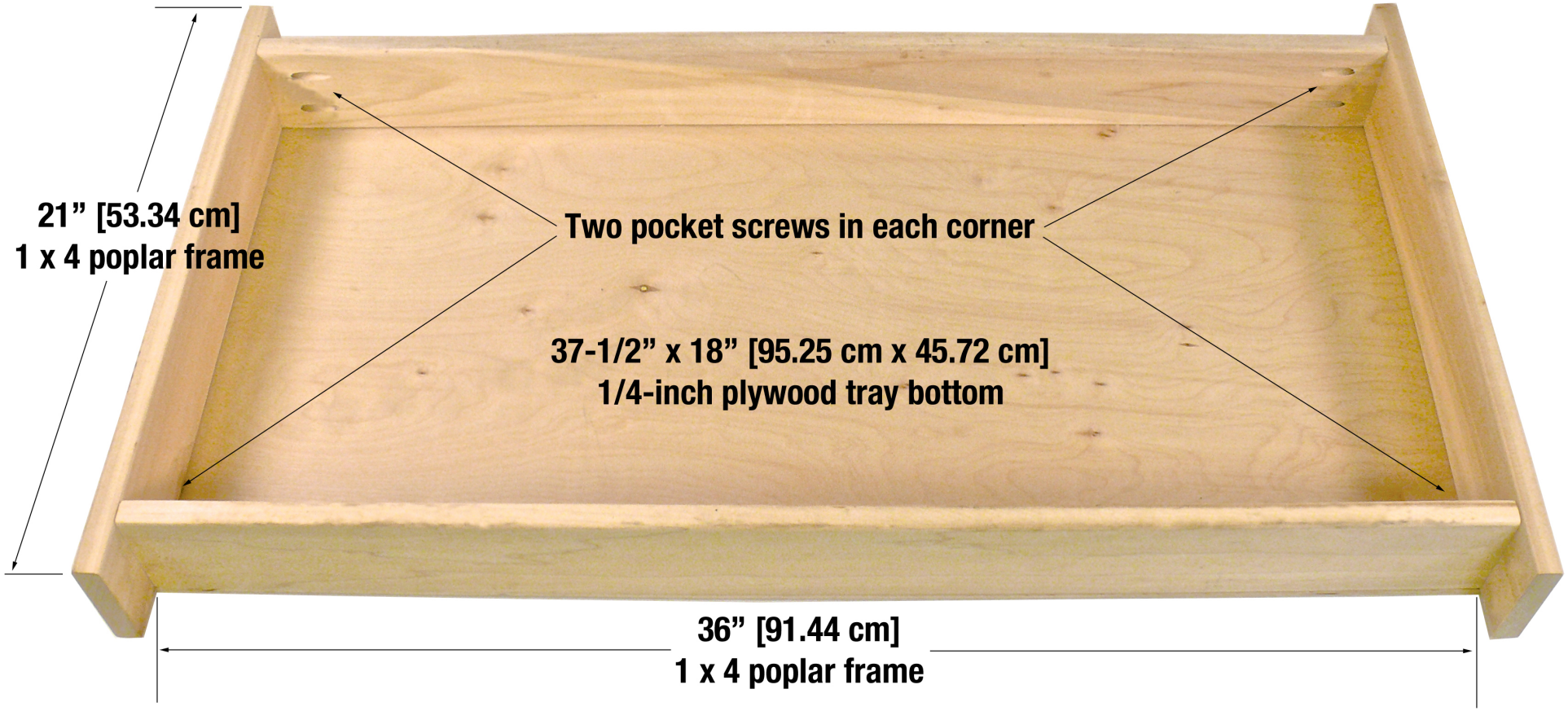
12 - ¼" x 3" [0.635 cm x 7.62 cm]
12 - washers to fit bolts
12 - wingnuts to fit bolts

Underside of table top and upper frame



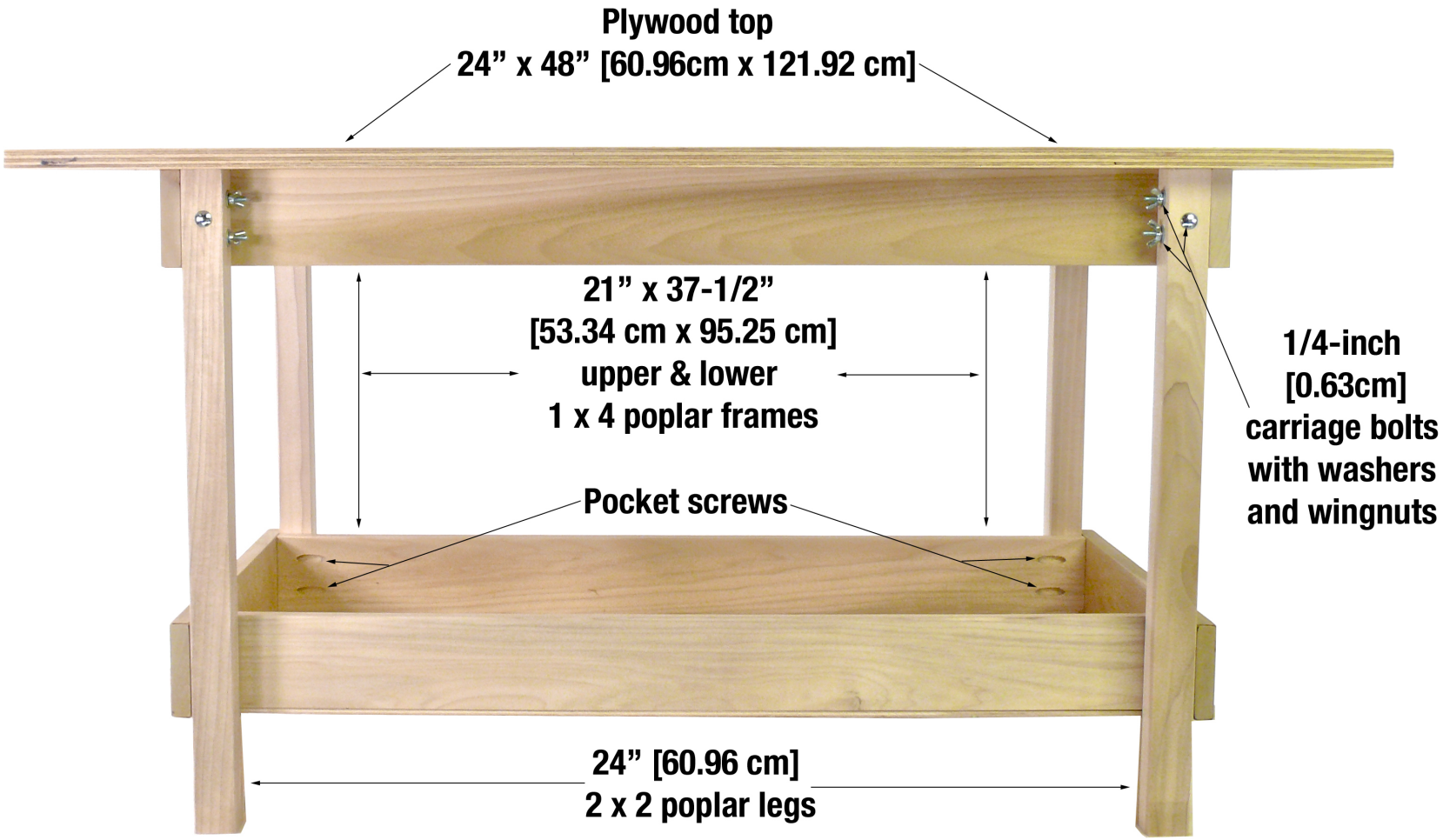
WORKBENCH - TABLE TOP ASSEMBLY

Lower frame and shelf


21” [53.34 cm]
1 x 4 poplar frame
Two pocket screws in each corner
37-1/2” x 18” [95.25 cm x 45.72 cm]
1/4-inch plywood tray bottom
36” [91.44 cm]
1 x 4 poplar frame

WORKBENCH - LOWER SHELF ASSEMBLY

Workbench - side view



WORKBENCH - SIDE VIEW ASSEMBLY

Overview

This junior-sized workbench is great for kids who like to build, paint or tinker! It's extremely sturdy and has a lower shelf to store tools and materials!

1. Rub

Start by applying a protective coat of MinWax WoodSheen on the plywood table top.

2. Clamp

Next, following the supplies list on Page 3, saw to length all of the boards you'll need to make the frame and legs of the workbench. Clamp each board with two clamps so it stays firmly in position while you cut.

3. Cut

Kids can easily cut wood using a Japanese-style hand saw, which cuts on the pull stroke so it never buckles or sticks. Just ensure that kids keep one hand behind their back so they can't possibly hurt themselves.

4. Sand
After cutting all of the lumber, use a sanding sponge to soften the edges of the boards.

5. Drill
Next, use a Kreg Jig to drill pocket holes, which create really strong joints. A Kreg Jig makes building all kinds of structures fun, fast and easy. Even a 7-year-old can use it!

6. Sand
Remove any slivers from the freshly-drilled pocket holes.

7. Drill some more
Keep drilling pocket holes following the layout diagram on Page 5.

8. Clamp
After drilling all of the pocket holes, start assembling the frame using a Kreg clamp, which will keep the boards lined up while you fasten them.

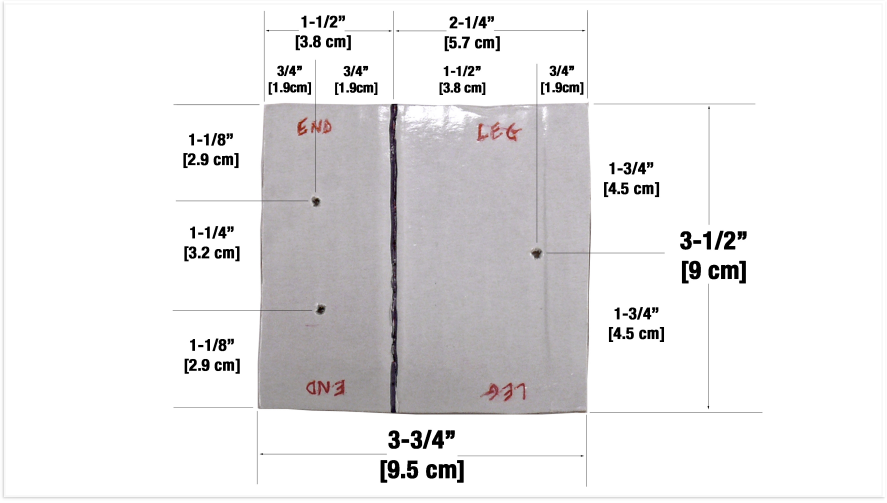
9. Fasten
Now you're ready to drive a screw into the top pocket hole.

10. Unclamp
Remove the Kreg clamp since the boards are now held in place by the screw you just installed in the upper pocket hole.

11. Fasten
Now install a pocket screw in the bottom hole to complete the corner joint.

12. Keep clamping and driving
Continue to fasten all four corners, creating correct board alignment using a short 2 x 2 cut-off block to simulate where the legs will eventually go.

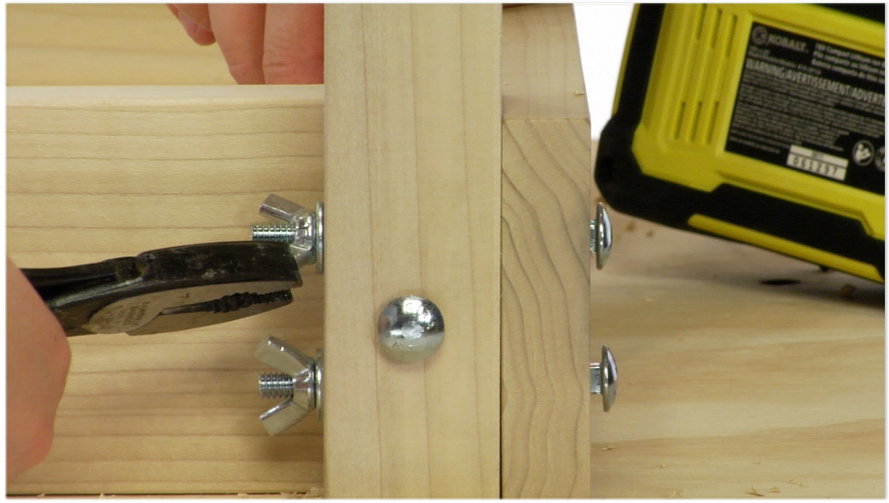
13. Fasten
Next, fasten the frame to the underside of the bench top by driving screws into each of the pocket holes you made in the frame boards.



14. Make
To eliminate repetitive measuring and marking for the corner bolts, make a homemade cardboard template measuring 3-1/2 inches by 3-3/4 inches [8.9 x 9.5 cm] and fold it along the black line.

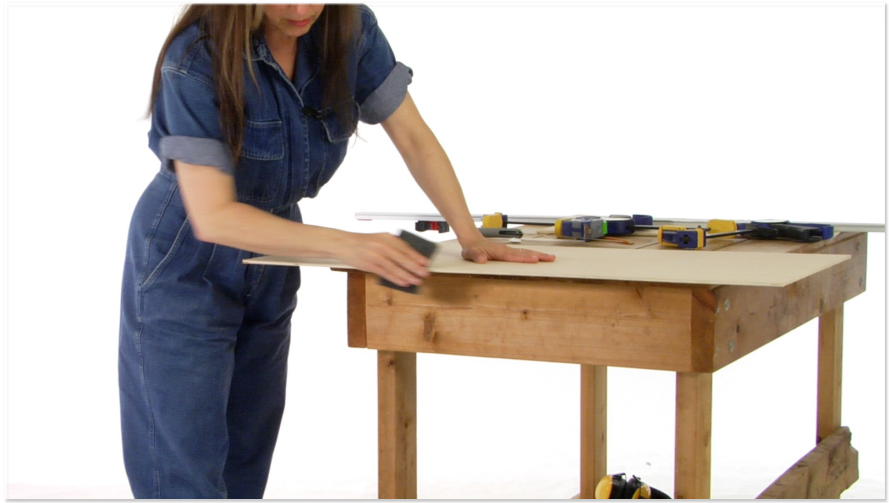
15. Mark
Wrap the template around the first corner, placing the part of the template marked 'END' on the frame, and holding the part of the template marked 'LEG' against the 2x2 poplar leg. Now mark the correct spacing for the corner bolts using an awl (or pencil). Repeat on each corner.

16. Drill
Next, use a 1/4-inch [.64 cm] drill bit to drill bolt holes through the frame and legs at all four corners.



17. Fasten
Install the bolts, washers and wingnuts. Each leg gets three bolts to make it secure. Use pliers to tighten the wingnuts until the head of the bolt bites into the wood.

18. Cut
Next, cut one piece of 1/4-inch plywood measuring 18” x 37-½” [45.7 x 95.3 cm] for the bottom storage shelf. Lowe's will cut plywood for you, or you can easily cut it with your Japanese-style hand saw. TIP: Use a clamp-on saw guide for a nice straight line!



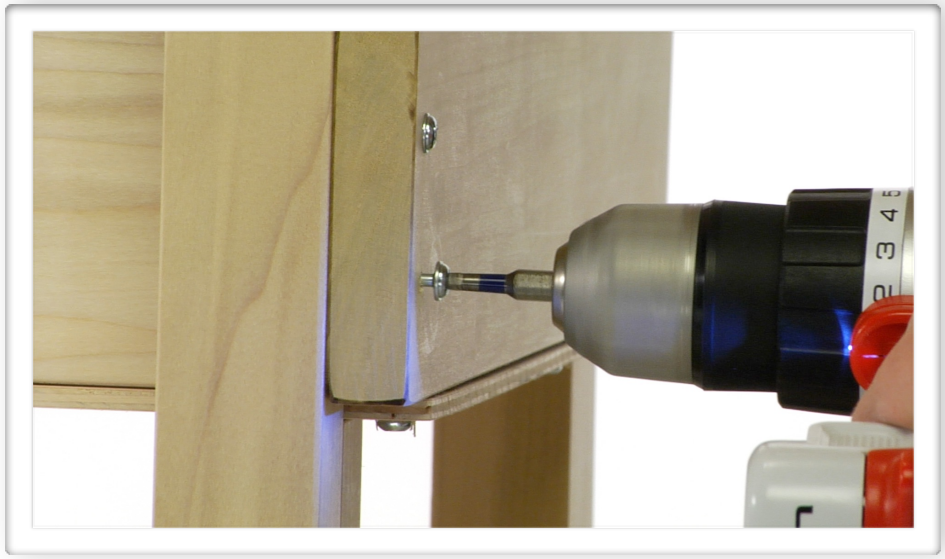
19. Sand
As always after a fresh cut, remove slivers with a sanding sponge.

20. Position shelf bottom
After assembling the lower shelf-frame, which is identical to the top frame, put the shelf bottom in position.

21. Fasten
Attach the shelf bottom to the frame using 1/2-inch [13mm] pan-head screws. One screw every 4 inches [10 cm] will make a sturdy shelf!

22. Assemble
Now it's time to put it all together! Line up the legs over the lower shelf and then balance the lower shelf on four 4-inch [10 cm] cut-off blocks to support the weight while you fasten the lower frame to the legs.

23. Drill
Drill two pilot holes in each corner of the frame using a 1/8-inch [12.5mm] drill bit.



24. Fasten
Drive two 1-1/4-inch [32 mm] Kreg screws to fasten the bottom shelf to the legs.

Great job! Time to build stuff!